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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/609,007
Filing Date: June 27, 2003
Appellant(s): JACOBS ET AL.

Harold C. Moore
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 11/02/2006 appealing from the Office action mailed 09/07/2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US 5,304,093	SHARP et al.	4-1994
EP 0 834 723 A1	BUMP et al.	4-1998

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 3 - 5, 7 - 11, 13 - 15, 17 - 21 and 23 - 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Sharp et al. (US 5,304,093).

Claims 2, 6, 12, 16 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharp et al. (US 5,304,093) as applied to claims 1, 3 - 5, 7 - 11, 13 - 15, 17 -21 and 23 -26 above, and further in view of EP 0 834 723.

(10) Response to Argument

A. <u>The Anticipation Rejection of Claim 1</u>

Sharp et al. discloses an arrangement for calibrating a Venturi valve (Col. 4, lines 59 - 65), with the valve having a variable shaft position and calibration information is stored in the form of a curve relating the position of the actuator to the flow rate, with the position of the actuator being proportional to the voltage provided thereto. It is noted that the actuator in sharp et al. is responsive to voltage supplied to it and such a voltage is derived from the calibration curve, each applied voltage corresponding to a specific flow rate. Further, Sharp et al. note that (Col. 4, lines 65 - 68) that the relationship between actuator position (and hence the voltage supplied thereto) and the flow is logarithmic and thus non-linear whereby voltage differences between first set of voltages is inherently greater that between a second set of voltages. The characteristic curve shown in Fig. 2 is taken here to be a representation of the tabular relationship between the actuator voltage and the flow. The arrangement of Sharp et al. necessarily operates between a minimum and maximum voltage (See Fig. 1, for example).

Applicant is arguing that Sharp et al. fails to disclose a processing circuit that performs the calibration operations of claim 1. In response, it is noted that Sharp et al. does indeed disclose a processing circuit (55) and the alleged calibration operations of claim 1 have been recited in the form of functional limitations **ONLY** that the processing circuit (55) is certainly capable of performing and hence the anticipation of the claimed limitations by Sharp et al. as set forth in the Final office action is proper.

B. Claim 21

Claim 21 is again an apparatus claim wherein various limitations are recited pertaining to provision of plurality of voltages, receiving a flow measure corresponding to each of the plurality of voltages and storing information representative of such correspondence. However, it should be noted that as with claim 1, the alleged calibration operations of claim 21 have been recited in the form of functional limitations **ONLY** that the processing circuit (55) is certainly capable of performing and hence the anticipation of the claimed limitations by Sharp et al. as set forth in the Final office action is proper.

Sharp et al. discloses an arrangement for calibrating a Venturi valve (Col. 4, lines 59 - 65), with the valve having a variable shaft position and calibration information is stored in the form of a curve relating the position of the actuator to the flow rate, with the position of the actuator being proportional to the voltage provided thereto. It is noted that the actuator in sharp et al. is responsive to voltage supplied to it and such a voltage is derived from the calibration curve, each applied voltage corresponding to a specific flow rate. Further, Sharp et al. note that (Col. 4, lines 65 - 68) that the relationship

between actuator position (and hence the voltage supplied thereto) and the flow is logarithmic and thus non-linear whereby voltage differences between first set of voltages is inherently greater that between a second set of voltages. The characteristic curve shown in Fig. 2 is taken here to be a representation of the tabular relationship between the actuator voltage and the flow. The arrangement of Sharp et al. necessarily operates between a minimum and maximum voltage (See Fig. 1, for example).

C. Claim 11

The arrangement disclosed by Sharp et al. necessarily performs the method recited in claims 11 in its usual and normal operation. In regard to arguments concerning the limitation "installing the venturi valve in a facility" it is noted that Sharp et al. clearly discloses such to be the case in Figure 2. It is further noted that since the calibration curve is being utilized to position the valve to produce a desired flow, such calibration necessarily refers to an "in-situ" calibration.

Sharp et al. discloses an arrangement for calibrating a Venturi valve (Col. 4, lines 59 - 65), with the valve having a variable shaft position and calibration information is stored in the form of a curve relating the position of the actuator to the flow rate, with the position of the actuator being proportional to the voltage provided thereto. It is noted that the actuator in sharp et al. is responsive to voltage supplied to it and such a voltage is derived from the calibration curve, each applied voltage corresponding to a specific flow rate. Further, Sharp et al. note that (Col. 4, lines 65 - 68) that the relationship between actuator position (and hence the voltage supplied thereto) and the flow is logarithmic and thus non-linear whereby voltage differences between first set of

voltages is inherently greater that between a second set of voltages. The characteristic curve shown in Fig. 2 is taken here to be a representation of the tabular relationship between the actuator voltage and the flow. The arrangement of Sharp et al. necessarily operates between a minimum and maximum voltage (See Fig. 1, for example).

D. Claim 17

The arrangement disclosed by Sharp et al. necessarily performs the method recited in claims 17 in its usual and normal operation. Sharp et al. discloses an arrangement for calibrating a Venturi valve (Col. 4, lines 59 - 65), with the valve having a variable shaft position and calibration information is stored in the form of a curve relating the position of the actuator to the flow rate, with the position of the actuator being proportional to the voltage provided thereto. It is noted that the actuator in sharp et al. is responsive to voltage supplied to it and such a voltage is derived from the calibration curve, each applied voltage corresponding to a specific flow rate. Further, Sharp et al. note that (Col. 4, lines 65 - 68) that the relationship between actuator position (and hence the voltage supplied thereto) and the flow is logarithmic and thus non-linear whereby voltage differences between first set of voltages is inherently greater that between a second set of voltages. The characteristic curve shown in Fig. 2 is taken here to be a representation of the tabular relationship between the actuator voltage and the flow. The arrangement of Sharp et al. necessarily operates between a minimum and maximum voltage (See Fig. 1, for example).

E. The Anticipation Rejection of Claims 3-5 and 7-10

Claims 3-5 and 7-10 are rejected as being anticipated by Sharp et al. Appellants offer no further arguments other than that these claims depend from claim 1 whose anticipation rejection should be sustained for reasons set forth above.

F. The Anticipation Rejection of Claims 13-16

Claims 13-15 stand rejected as being anticipated by Sharp et al.. Claims 13-15 all depend from claim 11. Appellants offer no further arguments other than that these claims depend from claim 11 whose anticipation rejection should be sustained for reasons set forth above. The arrangement disclosed by Sharp et al. necessarily performs the method recited in claim 13 - 16 in its usual and normal operation.

G. The Anticipation Rejection of Claims 18-20

Claims 18-20 stand rejected as being anticipated by Sharp et al.. Claims 18-20 all depend from claim 17. Appellants offer no further arguments other than that these claims depend from claim 17 whose anticipation rejection should be sustained for reasons set forth above. The arrangement disclosed by Sharp et al. necessarily performs the method recited in claim 18 - 20 in its usual and normal operation.

H. The Anticipation Rejection of Claims 23-26

Claims 23-26 stand rejected as being anticipated by Sharp et al.. Claims 23-26 all depend from claim 21. Appellants offer no further arguments other than that these claims depend from claim 21 whose anticipation rejection should be sustained for reasons set forth above.

I. The Obviousness Rejections of Claims 2, 6, 12, 16 and 22

The patent to Sharp et al. discloses the claimed invention with the exception of explicitly disclosing a verification procedure of the calibration. The document EP '723 (identified as 'Emerson' by appellants) discloses (page 6, lines 55 - 58) that it is known in the art to verify the supplied calibration data for the purpose of obtaining a reliable calibration in actual use.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in the arrangement of Sharp et al. a procedure to verify the calibration data for the purpose of obtaining a reliable calibration in actual use, as recognized in EP 0 834 723.

It is noted that the steps of providing the plurality of test voltages in a particular sequence would necessarily form part of the verification procedure since the calibration data in Sharp et al exists in the form of a relationship between the actuator position i.e. voltage supplied and the resulting flow. It is noted that the actuator in sharp et al. is responsive to voltage supplied to it and such a voltage is derived from the calibration curve, each applied voltage corresponding to a specific flow rate. It is also noted that the appellants do not explicitly state that the verification process taught in Emerson does not involve applying plural test voltages. Appellants merely allege that the Emerson reference does not cure the alleged shortcomings in Sharp et al.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Ramesh Krishnamurthy

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